

# NATIONAL ADVISORY BOARD ANNUAL REPORT 1997



## BOARD MEMBERS

JAY J. BRANDINGER

Executive Director

New Jersey Commission on  
Science and Technology

MARÍA ESTELA DE RÍOS

Vice-President of Corporate Affairs

ORION International Technologies, Inc.

ROXI DOWNING

CEO, Chairman of the Board

Qualis, Inc.

IRWIN FELLER

Director, Institute for Policy

Research and Evaluation

The Pennsylvania State University

MAURICE WILLIAM LEE, JR.

President

Smokaroma, Inc.

EDWARD J. NOHA

Chairman of the Board

CNA Financial Corporation

JAMES L. QUILLIN

Secretary, Board of Directors

Logic By Design, Inc.

LAWRENCE J. RHOADES

President

Extrude Hone Corporation

WILLIAM R. WEBBER

Interim Director

PT CAM

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## MEP NATIONAL ADVISORY BOARD

**T**he NIST Manufacturing Extension Partnership National Advisory Board was created to provide guidance and advice on the MEP program from the perspective of industrial extension customers and providers who have a vision of industrial extension with a national scope.

MEP has developed its strategy and approach to accomplishing its mission based on a core set of guiding values. These values are derived from experience and lessons learned over the last eight years. The value that was the impetus for the MEP National Advisory Board is:

*MEP is committed to being industry-driven and market-defined. Industry provides the primary guidance for the selection and delivery of the products and services offered by the system; and subsequently, industry provides the evaluation of the quality and effectiveness of these services. Additionally, industry expects MEP to identify proactive actions that will enable small manufacturers to successfully address and implement changes in technology and the business environment in the future.*

With this value in mind, the MEP National Advisory Board was established to represent the views and needs of various stakeholders on MEP programs, plans and policies; to assess the soundness of MEP strategies; and to assess current performance of the program against MEP's goals.

# FOREWORD

The Manufacturing Extension Partnership (MEP), a program of the Department of Commerce's National Institute of Standards and Technology, is a nationwide network of services to assist smaller manufacturers in becoming more productive and globally competitive. MEP leverages federal support by teaming up with state and local organizations. Services are locally driven so that they address the specific needs of area manufacturers.

MEP created the Manufacturing Extension Partnership National Advisory Board to provide guidance and advice on the MEP program from the perspective of manufacturers and stakeholders. We provide input from a variety of backgrounds that include small and large manufacturing, labor, academia, economic development, consulting and state government. This mix will bring to MEP the outside advice to maintain and enhance the program's focus on the customer—America's smaller manufacturers.

We convened as a board for the first time on September 26, 1997. Our first meeting laid the foundation for the Board and launched the long-awaited formal process for representing the views and needs of various stakeholders into MEP's program planning.

We began with an overview of the MEP program and identified the following areas to be addressed in the coming year:

1. Although MEP centers share a common mission to serve the needs of smaller manufacturers, there are a variety of business models that centers have adopted to deliver services within their local markets. We intend to study these models and how the centers can maintain public focus while working toward increased revenue generation to enhance and support their program.
2. We will look at the NIST MEP program evaluation metrics and ascertain whether what is being measured is indicative of center operations and impact. Also, the Board will consider the value of developing standardized products and services to support regional or national initiatives.
3. We will address how the Board can raise awareness of MEP and build stronger relationships with programs that have complementary missions.

The Board believes that the MEP program is important and serves a national need. We look forward to providing input and guidance to position the MEP as a strong national system.

The Manufacturing Extension Partnership  
National Advisory Board

January 1998

# INTRODUCTION

## THE ADVISORY BOARD CHARTER AND 1997 ACTIVITIES

The Manufacturing Extension Partnership National Advisory Board (MEPNAB) of the National Institute of Standards and Technology (NIST) was established by direction of the Secretary of Commerce in October 1996. The Board provides advice on MEP programs, plans and policies; assesses the soundness of MEP plans and strategies; evaluates current performance against MEP program plans; and functions in an advisory capacity. The Board consists of nine members with backgrounds in industrial extension and all are appointed by the Director of NIST to serve terms ranging from one to three years.

The Board is required to hold three business meetings a year with other meetings called as deemed necessary by the Chairman or at least one-third of the members. MEP and NIST management are active participants in the business meetings. In September 1997, the Board held its first meeting in Gaithersburg, Maryland to set its agenda for 1998.

This is the first of the Board's annual reports which is to summarize the year's activities and is to be submitted to the Secretary of Commerce. The report contains the issues covered at the Board's introductory meeting. The Board is prepared to move forward in 1998 with a variety of topics covered in a separate section of this report to include the parameters of the Board's role and the scope of the national system.

# ORGANIZATION

## MISSION STATEMENT

**To strengthen the global competitiveness of small U.S.-based manufacturing firms** by providing information, decision support, and implementation assistance to smaller manufacturing firms in adopting new, more advanced manufacturing technologies, techniques, and business best practices.

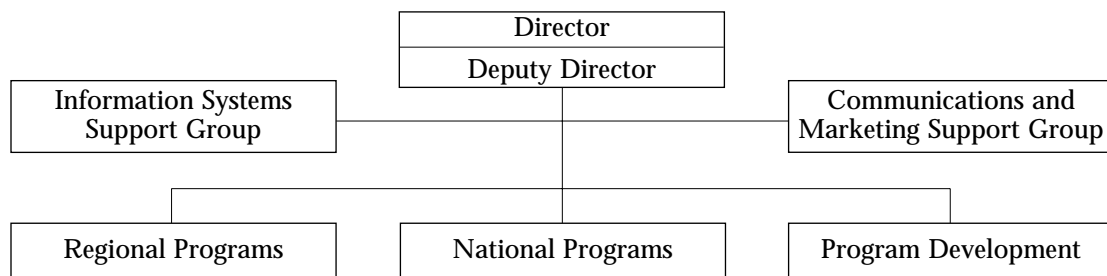
## VISION STATEMENT

By the year 2005, the Manufacturing Extension Partnership will be recognized internationally as an essential ingredient of America's industrial support infrastructure and one which facilitates competitive advantage to its smaller manufacturing firms.

## ORGANIZATIONAL STRUCTURE

See chart below for MEP organizational structure.

## MEP ORGANIZATIONAL STRUCTURE



## GUIDING VALUES: THE MEP GUARANTEE

*Sharpened by years of experience working with private industry, MEP's business strategies are a direct reflection of the key values shared with its partners.*

### **MEP. Industry-Based. Industry Defined.**

MEP services address the needs of the national market as well as the unique needs of each company. These may include the latest technological advances. They may just as likely include assistance in business planning, plant layout, marketing, and paperless accounting systems.

### **MEP. Building Upon State And Local**

**Resources.** MEP works closely with local state organizations—universities, governments, and industry—to build upon existing state resources and establish or expand programs. In partnership with states, MEP channels individual strengths into a single goal of more reach, focus, and services for manufacturers.

### **MEP. Programs Built On Merit-Based**

**Competition.** All new extension systems compete equally for MEP funding. Proposals are evaluated and judged on industry need, market awareness, and service commitment and delivery. MEP's goal is to put extension services within reach of all 381,000 smaller manufacturers across the country. But funding for extension services is reserved for those which stand up to a rigorous review and competitive process.

### **MEP. Leveraging Private Sector Resources.**

The array of private sector consultants is large, but often the cost-of-sales for these consultants keeps them out of reach of smaller manufacturers. MEP services link these customers and consultants, often acting as brokers in helping firms locate private sector experts who can help them with their unique challenges.

### **MEP. A Perfect Resource For The**

**Companies Who Seek It.** Companies interested in modernization may not know how to pursue it. They must have the commitment and willingness to invest wherever possible the resources necessary to initiate and implement improvements. MEP does not seek to assist companies uninterested in helping themselves.

### **MEP. Making Every Dollar Go Further.**

Manufacturers face a wide variety of needs in areas such as environment, workforce, financing, and production technologies. Rather than creating new programs to address these needs, MEP partners with other organizations—other government agencies, national associations, and regional specialists—to develop and deliver specialized programs through the MEP network.

### **MEP. Bottom-Line Impacts Are The Real**

**Measure of Success.** MEP's success is defined not by the breadth of the services it delivers, but by the real bottom-line impacts these services bring to client companies. MEP rigorously and regularly evaluates these impacts, in such terms as increases in sales, jobs, and productivity.

### **MEP. Investing In Futures.**

MEP is committed to serving industry, both for today and for the future. That's why innovative methods of extension and assistance to manufacturers are being explored and developed.



# SUMMARY

## MEPNAB SEPTEMBER 1997 MEETING

The first and only meeting held in 1997 was opened by Kevin Carr, Director of the Manufacturing Extension Partnership who welcomed the Board members and attendees to the first Manufacturing Extension Partnership National Advisory Board (MEPNAB) meeting. Carr introduced Edward Noha, on behalf of Robert Hebner, Acting Director of the National Institute of Standards and Technology, as the Chairman of the MEPNAB.

Carr then introduced Hebner who highlighted NIST's primary mission to promote economic growth by working with industry to develop and apply technology, measurements, and standards. Hebner gave a brief overview of each of the four programs that NIST uses to carry out its mission: Measurements and Standards, Advanced Technology Program, Manufacturing Extension Partnership, and National Quality Program.

Hebner then moved to management issues within NIST and the project selection that occurs through NIST management review and external review panels. He explained that selection criteria include criticality, fit to mission, probability of success, and uniqueness.

He briefly touched on the external evaluation review efforts at NIST including National Research Council Panels for the NIST Labs, Visiting Committee on Advanced Technology for NIST, Board of Overseers for the Baldrige National Quality Program, and the newly created National

Advisory Board for the Manufacturing Extension Partnership. Hebner gave the Board its charge of peer review of MEP and emphasized that he is counting on the Board to steer the MEP in the best possible direction. Hebner then turned the floor back to Carr who gave an overview presentation of MEP, its future direction and goals.

Carr began by giving the Board an overview of MEP beginning in 1988 when the initial focus was on the transfer of technology from the federal labs to smaller manufacturers thereby increasing their competitiveness. From this technology push it was determined that smaller firms were not ready for state-of-the-art technology. In some cases, advanced technologies meant getting a computer into the company; not advanced use of CAD/CAM systems or robotics. This market pull became the focus for the MEP programs' broader vision of what smaller companies need to begin to improve their global competitiveness.

Carr also discussed the importance of smaller manufacturers in today's economy. He stated that smaller firms are responsible for 54.9% of the value-added in U.S. manufactured goods and in many cases, smaller manufacturers are a significant percentage of large manufacturers' supply-chain. He explained the federal-state partnership and how, as the federal dollar investment goes down, the center needs to make up the difference in fees for service and other revenues. Also covered was the need to

integrate MEP centers in all 50 states and Puerto Rico into the national network and that providing the infrastructure to enable resource leveraging among centers maximizes the return on federal and state investment.

Carr then turned to the funding history of the MEP program which has grown from three centers and a funding level of \$5 million in 1988 to a national network and \$95 million in funding in 1997.

Carr shared the vision of MEP in 2010, which included the integration of MEP centers into a working national network, the globalization of companies, and the tendency to create “virtual companies” by small companies. Smaller manufacturers contracting for needed services outside of their organization and expanding their geographic boundaries is permitted by the rapid growth of information technology. Part of this vision rests on the program shift from concentrating on achieving national coverage to building high-performance centers and a high-performance system nationally. In the next four years, MEP will be focused on optimizing the center and system performance. Future initiatives for delivering high-value services to our customers will focus on supply-chain optimization, information technology, and infusion of appropriate advanced technologies.

He then briefed the Board on the sunset issue. The sunset clause prohibits funding of Centers after six years. The House Science Committee has passed legislation to eliminate sunset. Centers could continue to receive funding based on positive evaluation every two years. Carr noted that the elimination of sunset will allow long-term focus on the smaller manufacturers, provide stability within centers and the MEP, system will build better relationships with states, and will help ensure that center and program activities will be performance-based.

Carr then moved to performance measures for the program. He closed with a discussion of the current strategic planning process (in-process), and presented the mission and vision statement, and the strategic goals. He is taking the strategic plan to the more than 70 center directors across the country in October and November 1997. Carr will bring input from the centers to the next meeting. He asked the Board to weigh in on the plan after he has the input from the center directors.

Ruth Haines, acting director, Regional Programs began by covering the benefits of leveraging the federal dollars and quoted statistics proving that case. She told the Board that the locations in 50 states and Puerto Rico equated to over 400 sites and nearly 2,000 staff serving 63,108 clients since 1989. She said the centers are affiliated with over 3,000 organizations in the states. For management purposes, the national system is structured into six regions covered by 13 regional managers. She then described the support MEP provides for the centers and the system including the merit-based competitive process for selection of centers and the day-to-day working relationship that NIST MEP has with the centers and partners.

Haines then briefed the Board on statistics on the characteristics of centers and how they vary in size, staff, coverage, organizational structure, partnerships and affiliations, and service delivery models. In addition, centers now fall across the federal funding cost-share spectrum with 44 at the 50/50 share, 15 at the 60/40 cost-share, and 9 at the 66 2/3/33 1/3 cost-share level.

Next Haines turned to center evaluation and related to the Board the most frequently cited strengths of the centers by center review panel evaluators.

Haines then turned to the most significant issues facing Regional Programs, including: center director turnover, increased state commitment, field staff development, revenue generation, market segmentation and product development, capacity planning, achieving greater efficiencies and effectiveness, and NIST MEP's value-added to support local programs were cited as the top issues the Regional Programs staff will focus on in the future.

Carr introduced Sam Kramer, Kramer Associates, to facilitate the session on the National Advisory Board's charge. Kramer began by setting the stage for the Board by describing the NAB charter's defined goals and objectives as providing advice on MEP programs, plans and policies, assessing soundness of MEP plans and strategies, and assessing current performance against MEP program plans. He talked about the legal foundation of the Board and that it is chartered under the Federal Advisory Committee Act which has been approved by Commerce, Congress and the White House and that it will function in an advisory capacity to MEP.

Kramer then addressed MEP's role as a national system asking "What does it mean?" and "What constitutes the system?" Kramer showed the growth in the system since 1989 and talked about how the focus has been on individual centers and now it must shift to the system as a whole. He stressed this as the charge and challenge of the Board to assist MEP in its shift from focus on individual centers to a system working as efficiently as possible.

Chairman Noha described how MEP needs to create awareness in the market place, he sees assessments as a useful tool to establish credibility and relationships with companies. This is going to be looked at more fully in future meetings.

A future item for Board consideration is identifying a core set of services that each center in the network can offer. This would also support supply chains across state lines by providing the same product to the company regardless of which center assists them. Noha said MEP has to be able, as a system, to assure that centers across the country can offer the same services/products.

A Board initiative to be considered is to formally tap into resources of NIST labs and to have MEP center staff gain exposure to what research is going on at NIST in advanced technologies—perhaps through an exchange program. The Board would also like to see a draft of MEP's strategic plan at the next meeting.

As a closing remark, Chairman Noha noted that he believed that three meetings a year of the Board is not enough and discussed other mechanisms beside meetings to accomplish their work. Dates are to be set for the three meetings in 1998. Each Board member is to forward Noha their thoughts on future areas for Board consideration for 1998.

## AREAS FOR REVIEW IN 1998

**The following listing was provided by the Board as areas they will address in 1998:**

1. Define the national system. Focus on the MEP system by studying the various business models that centers have adopted to deliver services within their local markets.
2. Investigate the evaluation protocols.  
Investigate the direction of the program's evaluation metrics—performance benchmarking versus best-practice case studies.
3. Delve into the MEPNAB's role. How can the Board act to raise the image and communicate the success of MEP to industry and key stakeholders, including private and public investors.

**The Board has approved the following meeting schedule for 1998:**

January 21, 1998.

Gaithersburg, Maryland

May 28, 1998.

Location to be determined

September 17, 1998.

Location to be determined



## JAY J. BRANDINGER

N.J. Commission on Science and Technology  
28 West State Street, P.O. Box 832  
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Phone: (609) 633-2740  
Fax: (609) 292-5920

### EXECUTIVE DIRECTOR N.J. COMMISSION ON SCIENCE AND TECHNOLOGY

### UNIVERSITY EDUCATION

Ph.D., 1968, Rutgers, the State University  
M.S., 1962, Rutgers, the State University  
B.S., 1951, The Cooper Union

### EDUCATIONAL EXPERIENCES

1992 - 1994  
N.J. Department of Higher Education's  
Strategic Planning Task Force on Economic  
Development.

1992 - 1994  
N.J. Department of Education Statewide  
Systemic Initiative.

1989 - 1991  
Board Member, TCI's Industrial Advisory  
Committee (formerly RCA Institute).

1986 - 1987  
Administered RCA Corporate Continuing  
Engineering Education Program, Graduate  
& and Undergraduate Courses.

1984 - 1986  
Member, Indiana Corporation for Science  
& Technology Communications Group.

1983 - 1986  
Member, Dean's Industrial Advisory Board  
School of Engineering & Technology,  
Indiana & Purdue Univ. at Indianapolis, IN.

1983

Member, Indiana Congress on Education,  
Delegate-at-Large.

1974 - 1986

Member, Editorial Advisory Board, RCA  
Engineering.

1971 - 1975

Adjunct Associate Professor of  
Mathematics, Rider College, Trenton, NJ  
introduction to Mathematics, Algebra and  
Applied Calculus & Analytic Geometry, I,  
II, III.

### CAREER EMPLOYMENT

1991 - Present

Executive Director, New Jersey Commission  
on Science and Technology.

1991 - Present

N.J.-Israel Commission Board, Science and  
Technology.

1989 - 1991

President, Superconductor Applications Inc.

1988 - 1991

President, Electromagnetic Energy Policy  
Alliance

1988 - 1991

Vice Chairman, Surface Processing  
Consortium

1987 - 1991

Vice President, David Sarnoff Research  
Center, Princeton, NJ.

1986 - 1987

Staff Vice President, RCA Corporation,  
Princeton, NJ.

1984 - 1986

Staff Vice President, Engineering & Systems  
Engineering, RCA Corp., Indianapolis, IN.

1983 - 1984

Division Vice President, Disc Operations,  
RCA Corporation, Indianapolis, IN.

1979 - 1983

Division Vice President & General Manager,  
RCA Corp., Indianapolis, IN.

#### SCIENTIFIC SPECIALTIES

Systems, electrical engineering, mathematical statistics, chemical processing, statistical communication theory and practice. Bio-effects of Electromagnetic Radiation, Superconducting, Materials and Application, Surface Processing of Materials for Structural & Electronic Applications.

#### MAIN FIELD

R&D Manufacturing and Materials.

#### OTHERS

Management.

#### CURRENT MEMBERSHIP IN PROFESSIONAL SOCIETIES OR ORGANIZATIONS:

Fellow, IEEE, 1990; Fellow, Society of Information Display, 1982; Senior Member, Society of Mfg. Engineers; Computer and Automated Systems Assoc. of SME; NY Academy of Sciences; Institute of Mathematical Statistics; American Assoc. For Advancement of Science; Eta Kappa Nu; Sigma Xi.

#### PROFESSIONAL SERVICES & ASSOCIATIONS

1994 - Present

NJ Academy of Sciences, Board

1994 - Present

New Jersey Inventor's Hall of Fame, Board

1991 - Present

Science & Technology Council of the States,  
National Governor's Association

1989 - Present

Junior Achievement of Central N.J., Board

1988 - 1991

Superconductor Applications, Inc.

1988 - 1991

Consortium for Surface Processing (NJIT,  
Rutgers University, Princeton University,  
Stevens Institute & David Sarnoff Research  
Center)

1986 - 1991

Electromagnetic Energy Policy Alliance

SEMATECH Center of Excellence in  
Plasma Etching

Advanced Technology Center for the  
state of N.J.

IEEE Standards Parent Committee for  
Non-ionizing Radiation SCC-28.

#### PUBLICATIONS

**"Auto-correlation of Multipath Jitter"**, Sixth  
National Communications Digest, 1960.

**"Statistical Analysis of Multipath Jitter,"**  
J. Brandinger and H. Goldman, RCA  
Review, Sept. 1961, Vol. XXII , #3.

**"Approaches to Reliable and Efficient Data  
Communications, Using Sequential Decision  
Process,"** International Symposium on  
Information Theory-Noordwijk, The  
Netherlands, 1970.

**"Image Analysis,"** Brooklyn Polytechnic Institute Displays Colloquium, 1970.

**"Will Matrix Displays Replace the Cathode-Ray Tube?"**, Society for Information Display Journal, 1970.

**"Striped Color Encoded Single Tube Color Television Camera Systems,"** Chapter III, Advances in Image Pickup and Display, Vol. 2, Academic Press, 1975, J. Brandinger, G. Fredendall and D. Pritchard.

**"RCA Corporation Consumer Electronics Division Comments in Response to Notice of Panel Presentation, Docket #21010, RM 2577, Pertaining to UHF Television Receiver Noise Figures"**, May 10, 1978, before the Federal Communications Commission.

**"The RCA Videodisc System-An Overview,"** RCA Review, Vol. 42, No. 3, September 1981.

**"1981-The Year of the Video Disc,"** Colloquium on Video Disc Systems, IEE Professional Group E 14 (Television and Sound), London, England, November 1981.

**"Six Million Video Discs in 1982,"** Information Display, February 1982.

#### SUMMARY OF PRESENTATIONS

**"Creativity in the Industrial Environment,"** Bridge, Eta Kappa Nu, Spring 1984

**"Theory J., An Innovative Approach to American Management,"** Brigham Young University, Invited Paper, February 16, 1984.

**"China A Nation in Transition,"** The Sciencetech Club, Indianapolis, IN, June 1985.

**"American Manufacture Our Competitive Edge,"** ElectroTech Conference, April 1987.  
**"Commencement Address"** Technical Careers Institute, New York, NY, June 1990.

**"Management of Electromagnetic Energy Hazards",** EEPa Conference, Rutgers Univ., Cook College, New Brunswick, NJ, Oct. 16, 1991.

**"N.J. Technology Companies & Int'l. Collaboration,"** The Int'l. Business Development Council, Princeton Chamber of Commerce, Princeton, NJ, Oct. 30, 1991.

**"Careers, Careers in the Natural Sciences and Engineering,"** Princeton University, Princeton, NJ, November 9, 1991.

**"Information and Its Taming",** N.J. Software Industry Finance and Technology Conference, Hyatt Regency, New Brunswick, NJ, December 4, 1991

**"New Jersey Technology Companies & International Collaboration,"** Finland-New Jersey Technology Partnership Symposium, David Sarnoff Research Center, Princeton, NJ, June 4 , 1992.

**"Workforce 2000",** Governor's Symposium on N.J. Work force 2000: A Public/Private Partnership, Ramada, East Brunswick, NJ, October 21, 1992.

**"Managing in A Global Environment",** International Engineering Management Conference, Sheraton, Eatontown, NJ, October 26, 1992.

**"Technology Companies and International Collaboration",** Association of Consulting Chemists & Chemical Engineers, Hoboken, NJ, November 24, 1992.

**"Mirror Mirror on the Wall, Which is the Best Deal of Them All?"**, 1996 Conference of State Sponsored Seed and Venture Funds, Wash., DC, October 14, 1996.

**"Vision for the Twenty-First Century: Technology for Economic Development",** National Women's Republican Club, NYC, January 15, 1997.



## MARÍA ESTELA DE RÍOS

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2201 Bueno Vista Drive, SE, Suite 211  
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Phone: (505) 998-4000  
Fax: (505) 998-5060

VICE PRESIDENT, CORPORATE  
AFFAIRS  
ORION INTERNATIONAL  
TECHNOLOGIES, INC.

### SUMMARY OF EXPERIENCE

Maria Estela de Ríos has over 25 years of experience in general business and in government and commercial contracting. She is Executive Vice President of Corporate Affairs for ORION International Technologies, Inc. (ORION), a New Mexico based Research and Development Engineering Company, specializing in Nuclear and Environmental Engineering Services, Advanced Technologies, including Space Technologies, and Data and Control Systems. She is one of the founders of ORION and is Secretary of the Board of Directors, responsible for coordinating legal reviews, maintaining corporate records, and providing shareholder services. At ORION, she has senior management responsibility for all corporate procurement including creating and negotiating all contracts, establishing contract policy for current and future contracts, settling disputes, and contract oversight and compliance. She has worked in a university environment as a private consultant and administrator, most recently in the aerospace industry. Prior to ORION, she successfully performed in contract management positions of increasing responsibility with Public Service Company of New Mexico.

Mrs. de Ríos is a Certified Purchasing Manager. She has a Bachelor of Arts in

Chemistry/Mathematics from the University of New Mexico. She has served in leadership positions on the Boards of major community and business-related organizations since 1972. She is recognized as knowledgeable in the areas of economic development and international trade for the State of New Mexico. As such, she is a frequent speaker at forums and seminars. She currently serves on the Governor's Business Advisory Council and in 1992 was invited by the Defense Department to represent New Mexico at the Joint Civilian Orientation Conference, a prestigious review of our military focus. She has also spoken before the National Academy of Sciences' National Research Council on the subject of Science Education for Women and Minorities. Mrs. de Ríos is well traveled, speaks Spanish fluently, and has some capacity in German, as well.

### May 1987 - Present

ORION International Technologies, Inc., a 132-member research and development engineering firm performing work for the Federal Government. Founder and Co-Owner, Executive Vice President of Corporate Affairs, Secretary of the Board of Directors:

#### *Director, Contracts Management*

Senior management responsibility for creating and negotiating all contracts entered into by the corporation, recommending contract actions for current and future contracts, and for settling disputes. Oversight responsibility for corporate procurement, project accounting, and contract compliance.



*Acting Director, Personnel*

Direct responsibility for all corporate personnel actions. Provides the structure for recruiting and hiring all corporate staff; develops and implements corporate personnel policies; supervises benefits administrator; administers educational benefits program; coordinates personnel functions for all outlying ORION offices.

*Secretary of the Board of Directors*

Founding member of the Board of Directors. Coordinates all legal reviews; maintains all corporate records; responsible for shareholder services. Key participant in channeling resources to accomplish desired goals during growth of corporation.

January 1986 - May 1987

Public Service Company of NM,  
Albuquerque, New Mexico:

*Power Contracts Coordinator*

Maintained interutility contracts through periodic reviews and resolution of contractual issues. Negotiated other interutility contracts including transmission and power sales. Performed regulatory and licensing functions for the department which included preparation of testimony and responses to interrogatories, ANPP Prudency Audit and NRC Antitrust Reviews. Prepared contract documents. Provided management with recommendations for approval of contracts and agreements. Interfaced with system planning, rates, finance and legal departments as well as all levels of management.

June 1982 - December 1985

Public Service Company of NM,  
Albuquerque, New Mexico:

*Contracts Analyst*

Evaluated proposals received using cost and accounting principles implemented by the federal government. Routinely prepared complex cost plus fixed fee and cost plus incentive fee design and engineering services contracts. Developed negotiation strategy and alternate fall back positions. Lead

negotiations team for complex procurements more than \$50 million. Provided Contract Administration and problem resolution services to project engineers when contractual conflicts occurred. Provided management with recommendations for approval of contracts and agreements. Assisted in development of PNM's standard contract terms and conditions. Prepared responses in defense of Contracting Section's position with regard to its standard contract terms and conditions. Prepared department budget.

June 1981 - May 1982

Public Service Company of NM,  
Albuquerque, New Mexico:

*Contract Specialist*

Prepared Invitations for Bids; coordinated various data gathering efforts with legal, accounting, and engineering groups. Assisted project engineers in the preparation of workscopes. Prepared final contract documents for management approval. Assisted Department Manager in the preparation of the annual budget.

January 1981 - April 1981

University of New Mexico, Resource Center  
for Science and Engineering, Albuquerque,  
New Mexico:

*Program Consultant*

Provided consulting services required for the planning and execution of the 1982 Science and Engineering Exposition sponsored by UNM.

June 1976 - November 1980

Society for the Advancement of the  
Hispanics and Native Americans in Science-  
Denver, Colorado and Washington, DC:

*Executive Director*

Managed nonprofit national scientific organization with a membership of 200 Ph.D. scientists and engineers. Supervised 20 professional and clerical staff members. Managed a science and technology exposition in which 700 scientists, educators,

private corporation representatives and students participated. Developed, organized and executed plans for conferences and symposia attended by at least 300 participants per event. Prepared, reviewed, and maintained \$100,00 annual budget. Prepared funding proposals, developed operating procedures, developed artistic layout, and contents of pamphlets and brochures. Developed publicity campaigns for conference and symposia.

## EDUCATION

1980

University of New Mexico  
BA, Chemistry/Mathematics  
G.P.A. 3.7

Recognition:

Zia Award

University of New Mexico, 1996  
Awarded for Outstanding Service  
by an Alumnus.

Women on the Move

Young Womens' Christian Association,  
1986, 1987, 1996

Awarded for Outstanding Community  
Service.

## PROFESSIONAL REGISTRATIONS

Certified Purchasing Manager

C.P.M.

1984

Rectified

1989

Governor's Business Advisory Council

State of New Mexico  
1996 - present

Robert O. Anderson Graduate School of  
Management, University of New Mexico

Foundation Board Member  
1996 - present

Economic Forum

State of New Mexico Business Organization  
1996 - present

New Mexico First

Statewide Strategic Planning Organization  
1995 - present

College of Engineering, University  
of New Mexico

Community Advisory Council  
1995 - 1996

Camino Real Economic Alliance

Regional Bi-National Business Alliance  
1994 - present

Industry Network Corporation

Board of Directors  
1994 - present

United States-Mexico Chamber of Commerce

Member  
1993 - present

Director, New Mexico Office  
1996

Vice President Rocky Mountain Chapter  
1996

Board of Directors  
1996

National Contract Management Association

National Board of Directors  
1987 - present

President  
1992 - 1994

President-Elect  
1992 - 1993

Program Chairman  
1990 - 1991, 1991 - 1992

Hispano Chamber of Commerce

Chairman International Trade Committee  
1996 - present

Chairman  
1995 - 1996

Chairman-Elect  
1994

Board of Directors  
1991 - present



## ROXI DOWNING

4600 Park Avenue  
Des Moines, Iowa 50321  
Phone: 515-243-3000  
Fax: 515-280-1417  
E-mail: roxid@qualisinc.com

### CEO & CHAIRMAN OF THE BOARD QUALIS, INC

Roxi Downing, CEO and Chairman of the Board, co-founded Qualis, Inc. with her husband, Dick in 1978. Qualis is a manufacturer of private label, over-the-counter pharmaceuticals, medical devices, health and beauty aids. The firm has two marketing divisions: one serving animal health and the other serving human health. Products are developed and marketed to wholesalers and retailers throughout the United States.

Roxi has been instrumental in the strategic planning and organizational design of the company with management emphasis in the areas of finance, operations, and regulatory compliance. Under her leadership, Qualis has transitioned its market position from contract services (outsourcing job shop services) to a manufacturer and marketer of company-developed products. She has recruited and developed a management team to support organizational growth and provide professional management skills while maintaining a corporate culture of entrepreneurial spirit. Roxi led the organization in development and implementation of corporate policy and standard operating procedures to meet FDA and related regulatory compliance resulting in successful regulatory audits. She further developed and implemented systems to link annual regulatory product review to the company's activity based financial analysis, manufacturing and technical statistical process control data, purchasing activities and marketplace directives as a model for selecting common corporate goals across departmental units.

This system provided the foundation to align the organization and incorporate SPC/TQM team problem solving techniques in continuous-improvement activities. Roxi is a conduit for client negotiation and formation of strategically-selected alliances.

Throughout her professional career, she has been actively involved in numerous economic development, training, and not-for-profit organizations. Roxi was a charter member of the Iowa Manufacturing Technology Center's Advisory Council and most recently served as Chair. She currently serves on the Board of Directors for Iowa Association Business and Industry, which is active in economic development, educational programs, and state legislative issues that impact business environment. This past year she served on the Iowa Plan Advisory Committee, Iowa Business Council, which developed a State Strategic Plan for submission to the Governor. In addition, she serves on the Board of Directors for Junior Achievement and Youth Home Mid-America, not-for-profit organizations that provide development services to youths. Roxi is a member of Young Presidents Organization, a world-wide organization dedicated to the educational development of presidents. She previously served on the Board of Directors for Des Moines Economic Development; Center for Industrial Research (CIRAS), which provided assistance to Iowa manufacturing through Iowa State University Extension; Private Industry Council, which delivers retraining programs for the economically disadvantaged throughout the State of Iowa; and YWCA.



## IRWIN FELLER

The Pennsylvania State University  
N250 Burrowes Building  
University Park, PA 16802  
Phone: (814) 865-9561  
Fax: (814) 865-3098  
E-mail: iqf@psu.edu

### DIRECTOR, INSTITUTE FOR POLICY RESEARCH AND EVALUATION PENN STATE

1973–present  
The Pennsylvania State University

### EDUCATION

1966  
Ph.D., University of Minnesota  
Economics

1959  
BBA, City University of New York  
Economics

### HONORS AND AWARDS

1988  
The College of the Liberal Arts Alumni  
Society Distinction in the Social Sciences  
Award

February 1996–June 1997  
American Society of Mechanical Engineers  
(ASME) International, State Government  
Fellow in Pennsylvania

### MANUSCRIPTS ACCEPTED AND FORTHCOMING

“The University as an Instrument of State  
and Regional Economic Development—  
The Rhetoric and Reality of the U.S.  
Experience.” In Paul David and Edward  
Steinmueller (eds.), *The Productive*

*Tension: University–Industry Research  
Collaborations in the Era of Knowledge-  
based Economic Development* (Stanford,  
CA: Stanford University Press).

“The Relevance of Firm Learning to the  
Design of Manufacturing Modernization  
Programs” with Amy K. Glasmeier, Melvin  
M. Mark, and Kurt Fuellhart (*Economic  
Development Quarterly*).

“Federal and State Government Roles in  
Science and Technology Policy.” *Economic  
Development Quarterly*: in press.

### MANUSCRIPTS IN PROGRESS

“The Microeconomics of Manufacturing  
Modernization Programs” (with Jon P.  
Nelson)

“The Technological Development of  
Magnetic Resonance Imaging” (with J.  
David Roessner)

“Matching Fund and Cost-sharing  
Requirements in Federal Support of  
Academic Research”

“University Responses to Federal Agency  
Matching Fund/Cost-sharing Practices”

## CURRENT SPONSORED RESEARCH PROJECTS

Feasibility Study of Estimating the Social Savings from Manufacturing Technology Centers Projects (with Jon P. Nelson).  
Sponsor: National Institute of Standards and Technology, \$43,826 (Expiration: December 1997).

Future of the Research University. Sponsor: American Association for the Advancement of Science, \$225,000 (October 1997–September 2000).

## SELECTED PUBLICATIONS

Mark, Melvin M., Irwin Feller, and Scott Button (1997). "Integrating Qualitative Methods in a Predominantly Quantitative Evaluation: A Case Study and Some Reflections." In J. Greene and V. Caracelli (eds.), *Advances in Mixed-Method Evaluation*. New Directions in Evaluation (San Francisco, CA: Jossey-Bass).

Feller, Irwin (1997). "Manufacturing Technology Centers as Components of Regional Technology Infrastructures." *Regional Science and Urban Economics* 27: 181–197.

Feller, Irwin (1996). "Technology Transfer from Universities." In J. C. Smart (ed.), *Higher Education: Handbook of Theory and Research* (New York: Agathon Press), pp. 1–42.

"The Determinants of Research Competitiveness Among Universities: A Critical Review of the Issue and the Literature." In Albert Teich (ed.), *Assessing Research Competitiveness* (Washington, DC: American Association for the Advancement of Science, 1996), pp. 35–72. Feller, Irwin and J. David Roessner (1995). "What Does Industry Expect from University Partnerships?" *Issues in Science and Technology* 12(1): 80–84.

Geiger, Roger and Irwin Feller (1995). "The Dispersion of Academic Research in the 1980s." *Journal of Higher Education* 66(3): 336–360.

Feller, Irwin and Gary Anderson (1994). "A Benefit-Cost Approach to the Evaluation of State Technology Development Programs." *Economic Development Quarterly* 8(2): 127–140.

Feller, Irwin (1993). "State Investments in Science and Innovation: Effectiveness for Innovation?" In Stanley Johnson and Sheila Martin (eds.), *Industrial Policy for Agriculture in the Global Economy* (Ames, IA: Iowa State University Press), pp. 129–148.

Feller, Irwin (1993). "What Agricultural Extension Has to Offer as a Model for Manufacturing Modernization." *Journal of Policy Analysis and Management* 12(3): 574–581.

Feller, Irwin (1992). "American State Governments as Models for National Science Policy." *Journal of Policy Analysis and Management* 11(2): 288–309.

Feller, Irwin (1992). "The Impacts of State Technology Programs on American Research Universities." In Roger Geiger and Thomas Whiston (eds.), *University and Research: The United Kingdom and the United States* (Buckingham, England: Open University Press), pp. 64–88.

Feller, Irwin (1992). "Recent Theoretical and Organizational Approaches to U.S. Technology Policy." In W. Henry Lambright and Dianne Rahm (eds.), *Technology and Competitiveness* (New York: Greenwood Press), pp. 117–133.

Feller, Irwin (1990). "University Patent and Technology Licensing Strategies." *Educational Policy* 4: 327–340.

Feller, Irwin (1990). "Universities as Engines of R&D-based Economic Growth: They Think They Can." *Research Policy* 19(4): 335–348.

Feller, Irwin (1990). "University–Industry Research and Development Relationships." In Jürgen Schmandt and Robert Wilson (eds.), *Growth Policy in the Age of High Technology: The Role of Regions and States* (New York: Unwin), pp. 313–343.

Feller, Irwin (1988). "Evaluating State Advanced Technology Programs." *Evaluation Review* 12(3): 232–252.

Feller, Irwin (1988). "Political and Administrative Aspects of State High Technology Programs." In J. David Roessner (ed.), *Government Innovation Policy: Design, Implementation, Evaluation* (New York: Macmillan Press), pp. 105–117.

Feller, Irwin (1987). "Technology Transfer, Public Policy and the OMB-Cooperative Extension Imbroglio." *Journal of Policy Analysis and Management* 6: 1–21.

Feller, Irwin (1987). "Technology Transfer, Public Policy, and the Cooperative Extension Service." In Vernon Ruttan and Carl Pray (eds.), *Policy for Agriculture Research* (Boulder, CO: Westview Press), pp. 175–210.

Feller, Irwin, Patrick Madden, Lynne Kaltreider, Dan Moore, and Laura Sims (1987). "The New Agricultural R&D Policy Agenda." *Research Policy* 16: 315–325.

Feller, Irwin (1986). *Universities and State Governments* (New York: Praeger Publishers).

Feller, Irwin and Irene Johnston (1984). "The Innovation-Productivity Connection in the Public Sector." In Marc Holzer and Stuart Nagel (eds.), *Productivity and Public Policy* (Beverly Hills, CA: Sage Publications), pp. 171–189.

Feller, Irwin (1980). "Managerial Response to Technological Innovations in Public Sector Organizations." *Management Science* 26: 1021–1030.

Feller, Irwin (1979). "Three Coigns on Diffusion Research." *Knowledge* 1(2): 293–312.

Feller, Irwin and Donald C. Menzel (1978). "The Adoption of Technological Innovations by Municipal Governments." *Urban Affairs Quarterly* 13: 469–490.

Feller, Irwin and Donald C. Menzel (1977). "Diffusion Milieus as a Focus of Research on Innovation in the Public Sector." *Policy Sciences* 8(March): 49–68.

Feller, Irwin (1975). "Invention, Innovation and the Location of Industry." In Lyn Collins and David Walker (eds.), *Dynamics of Industrial Location* (London: John Wiley Publishers), pp. 83–108.

Feller, Irwin (1972). "Production Isoquants and the Analysis of Technological Change." *Quarterly Journal of Economics* 86: 154–161.

## PRESENTATIONS

Numerous papers at professional meetings, invited seminars, and workshop and panel presentations.

## PROFESSIONAL ORGANIZATIONS

Committee on Science, Engineering and  
Public Policy, American Association for the

Advancement of Science (1991–1993;  
1993–1997; Chair, 1994–1996/reappointed  
1996–1997)

National Council for the Advancement of  
Research, Conference Committee  
(1991–1995)

Association for Public Policy Analysis and  
Management, Chair, Institutional  
Representatives Caucus (1989–1990)

## PROFESSIONAL SOCIETIES

American Economic Association

Association for Public Policy Analysis  
and Management

American Association for the Advancement  
of Science

## CONSULTANTSHIPS

Carnegie Commission on Science,  
Technology, and Government

Cleveland Foundation

CONSAD Research Corporation

COSMOS Corporation

Ford Foundation

Hilton Foundation

National Conference of State Legislatures

National Governors' Association

National Science Foundation

Nexus, Inc.

National Institute of Standards  
and Technology

President's Office of Science and  
Technology Policy

SRI International

U.S. Department of Education

U.S. Department of Energy

U.S. General Accounting Office

University of California, President's Office

University of Maryland System,  
Chancellor's Office



## MAURICE WILLIAM LEE, JR.

Smokaroma, Inc.  
Drawer 25  
Boley, OK 74829  
Telephone: (918) 667-3341

### PRESIDENT SMOKAROMA, INC.

### EDUCATION

Boley High School  
Boley, Oklahoma  
Degree: High School Diploma  
Class Salutatorian, 4 year Honor Roll

University of Illinois  
Urbana, Illinois  
Four years  
Degree: Bachelor Electrical Engineering

Oklahoma School of Accountancy  
Tulsa, Oklahoma  
Dale Carnegie Sales Course

Oklahoma State University  
Stillwater, Oklahoma  
Introduction to Lotus Workshop

### CIVIC AND BUSINESS

1969 - 1973  
Commissioner  
Human Rights Commission,  
State of Oklahoma

1981 - 1983  
Committee Member  
Manpower Commission,  
State of Oklahoma

1985  
Committee Member  
Governor's Reform Committee,  
State of Oklahoma

1986 - Present  
Committee Member  
Governor's Economic Development  
Advisory Committee,  
State of Oklahoma

1959 - 1971  
Trustee  
Town of Boley, Oklahoma

13 years  
President  
Boley Chamber of Commerce

1969 - Present  
Chairman  
Rural Water District No. 1,  
Okfuskee County

1980 - 1982  
Board Member  
Creek Mental Health Services

Member & Chairman  
Okfuskee County Excise &  
Equalization Board

### OTHER

Trustee  
Ward Chapel AME Church, Boley, OK

Director & Chairman  
The Oklahoma Alliance for Manufacturing  
Excellence, Inc.



## EMPLOYMENT RECORD

1991 - Present

SMOKAROMA, INC.

Boley, OK

Position: President

Duties: To guide this company in the successful and profitable manufacturing and marketing of its products; Smokaroma, Instant Burger and associated spices, warmers, etc.

1990 - 1991

SMOKAROMA, INC.

Boley, OK

Position: Treasurer

Duties: Additional duties were to do Research and Development for new products.

1974 - 1990

SMOKAROMA, INC.

Boley, OK

Position: President

Duties: Same as above.

1970 - 1974

LEEFACT, INC.

Boley, OK

Position: Vice President

Duties: In addition to administrative duties, was responsible for marketing of wood products, supervision of production and performance of government contracts on crating skids, commercial furniture and fixtures. Also responsible for accounting procedures.

1968 - 1970

M. W. LEE MANUFACTURING

Boley, OK

Position: Vice President

Duties Supervision of production for commercial cooker operations and commercial furniture and fixtures operations.

1963 - 1968

M. W. LEE MANUFACTURING

Boley, OK

Position: Vice President

Duties: Marketing of "Smokaroma" cooker. Calling dealers, restaurants, etc. Also responsible for accounting procedures.

1958 - 1963

M. W. LEE MANUFACTURING

Boley, OK

Position: Plant Manager

Duties: Supervised and worked in various plant operations, such as, foundry, sanding, polishing, drilling, machining, assembling, and other operations.

1956 - 1958

DOUGLAS AIRCRAFT COMPANY

Position: Electrical Engineer

Duties: Responsible for electrical component designs.

1954 - 1956

UNITED STATES ARMY SIGNAL CORP.

Position: Commissioned 2nd Lieutenant

Duties: Assistant Chief of Teletypewriter Equipment Repair School. Released as a 1st Lieutenant then promoted to Captain in Reserves.

## SOLE PATENTS

1. November 19, 1985  
Electronic Control Circuit for Resistance Cooker-4,565,440
2. April 18, 1989  
Automatic Circuit Control for Electrical Resistance Cooking Apparatus-4,822,982

## JOINT PATENTS

Maurice W. Lee, Sr., and Maurice W. Lee, Jr.

1. April 19, 1958  
Time and Manually  
2,832,409
2. January 26, 1958  
Controlled Valve Resistance Cooker  
3,167,431

Assisted on following patents issued to Maurice W. Lee, Sr.

1. September 29, 1959  
Aromatic Pressure Cooker and Smoker  
2,906,191
2. May 16, 1961  
Pressure Cooker and Smoker  
2,984,171
3. April 17, 1962  
Pressure Cooker and Smoker  
3,029,724
4. June 8, 1961  
Aromatic Pressure Cooker  
3,583,307
5. November 9, 1971  
Grease Pressure-Pulsing Cooker  
3,618,587
6. June 8, 1961  
Cooking Apparatus  
3,583,307
7. June 13, 1972  
Appliance for Method of Pastry Making  
3,669,006

## SPECIAL RECOGNITION

November 29, 1968  
Feature Story-Life Magazine

August 9, 1969  
Feature Story-Business Week

August, 1964  
Feature Story-Ebony

Feature Story-Black Enterprise

Feature Story-New York Times

December, 1982  
James Barnett Award  
(Boley Chamber of Commerce)

February 4, 1983  
Feature Story-Wall Street Journal

February, 1982  
Prime Time TV-Dan Rather Evening News



## EDWARD J. NOHA

CNA Financial Corporation  
CNA Plaza  
Chicago, IL 60685  
Phone: (312) 822-5153

### CHAIRMAN OF THE BOARD CNA FINANCIAL CORPORATION

Edward J. Noha is chairman of the board of CNA Financial Corporation. He has held this position since October 1, 1992.

He previously served as chairman of the board and chief executive officer of the CNA Insurance Companies since February 1975. Under his leadership during this period, CNA rose from a financially unstable position to become one of the strongest and largest multiline insurance organizations in the United States.

Chicago-based CNA Financial Corporation is the holding company for CNA's insurance operations that include The Continental Corporation and Continental Casualty Company with its subsidiaries of Continental Assurance Company, National Fire Insurance Company of Hartford, American Casualty Company of Reading, Penn., and Valley Forge Life Insurance Company. Mr. Noha is also a director of Loews Corporation, which owns a majority interest in CNA Financial Corporation.

He is the past chairman of the Property Casualty Insurance Council and past member of the board of trustees for the American Institute for Property and Liability Underwriters and the Insurance Institute of America.

He is a director of Wheelabrator Technologies, Inc.

In July 1992, Mayor Richard M. Daley of Chicago appointed Noha to serve as the chairman of the Chicago Economic

Development Commission. Mr. Noha is also chairman of the executive committee of the World Trade Center Chicago and is chairman of the Chicago Manufacturing Center. He is an honorary member of the board of overseers of the Institute for Civil Justice, a director of the Chicagoland Chamber of Commerce and a director of the Chicago Central Area Committee. He is on the board of directors of Leadership for Quality Education, an organization made up of Chicago business leaders dedicated to helping improve the quality of the city's public education, and he is a member of the advisory board of the MakeAWish Foundation.

He is a member of the board of directors for the Evanston Hospital Corporation and is chairman of the Illinois Business Roundtable. Prior to being named chairman of the Roundtable, he chaired its Education Task Force. He is a member of The Commercial Club of Chicago and its Civic Committee, and the Illinois State Council on Business Education Partnerships.

He is frequently quoted concerning insurance issues and is a much sought after speaker among agency associations and other industry groups. Within the insurance industry, he is regarded as an early advocate of stronger business relationships between independent agents and the companies they represent. In 1990, the Independent Insurance Agents of America presented CNA with its President's Award in recognition of CNA's advertising campaign emphasizing the benefits independent agents provide to consumers. Noha pioneered

CNA's High Performance Agency (HPA) agreement, the first to put in writing guarantees of stable markets, commission levels and other contract provisions in return for business production commitments. The HPA program also includes agency and marketing development programs designed to help independent agents become more efficient and competitive.

In 1991, CNA earned the "Company Award of Excellence" from the National Association of Professional Insurance Agents (PIA), the third such award received by CNA from the PIA in the past decade. Most recently, the Marine Scholarship Foundation named Mr. Noha its recipient of the 1992 Semper Fidelis Award for his leadership in education. The award is the highest honor bestowed upon a civilian leader by the Foundation.

His background includes 20 years with Allstate Insurance Company. He last served Allstate as executive vice president, Insurance Group; executive vice president of Allstate Enterprises, Inc.; and member of the board of directors and the executive committee of Allstate. Earlier, he held executive management positions in the areas of claims, services, corporate planning, accounting and field operations.

Mr. Noha was previously associated with the Metropolitan Life Insurance Company and the U.S. Department of Justice.

Born in New York, Mr. Noha is a graduate of Pace University in New York and an honorary member of its board of trustees. In 1975, Pace awarded him an honorary degree of Doctor of Commercial Science.

#### **CHAIRMAN ECONOMIC DEVELOPMENT COMMISSION**

Mayor Richard M. Daley appointed Ed Noha Chairman of the Economic Development Commission of the City of Chicago in July of 1992. His most

significant accomplishments to date are as follows:

Mr Noha initiated the Breakfast with the Mayor program which, on a regular basis, takes the Mayor out into the communities to meet with local business people and exchange views to advance economic development throughout the city.

He also initiated the Visitation program where members of the Commission regularly visit with individual business owners—small, medium and large—in an effort to be responsive to concerns and constructive criticisms from the business community.

Most recently the Business Express program was implemented. Business Express provides for expedited responses to business requests for service or information from the city via a dedicated telephone number and special customer service group.

These programs are part of a continuing effort to communicate the Mayor's pro-business initiatives.

He spearheaded and successfully won a \$3 million-a-year grant to establish the Chicago Manufacturing Center. Located in the Lawndale area, the Center is intended to provide technology and training to small and medium-size businesses in order to enhance their global competitiveness. This has already been recognized as probably the most successful start-up of any of the centers countrywide.

He established as a primary objective of the EDC the retention and expansion of jobs in the city of Chicago. This is consistent with his belief that a job and promising career path are the best long-term solutions to the prevention of crime and elimination of societal problems that affect all major cities.

He was personally involved in retention efforts that have minimally conserved over 20,000 jobs over the last two years.



## JAMES L. QUILLIN

2590 Royal Oaks Drive  
Alamo, CA 94507  
Telephone: (510) 820-1895  
Fax: (510) 820-4156

### CONSULTANT

Jan 1995 - Present  
Logic By Design, Inc.

Secretary, Board of Directors of online marketing and commerce firm.

### EXECUTIVE

#### SECRETARY/TREASURER

April 1981 to Fall 1994  
California Conference of Machinists  
(IAM & AW)

On behalf of 150,000 members employed in aerospace, air transportation, manufacturing and automotive service and repair, appeared before administrative and legislative bodies. Also served as a registered lobbyist testifying before California Legislature and US Congress.

### COMMISSIONER OF LABOR

April 1975 to April 1981  
Appointed by Governor Edmond  
G. Brown, Jr.  
State of California

Directed a staff of 500 employees located in 25 offices throughout the State of California. Responsible for the enforcement and compliance of all matters pertaining to wages, hours, working conditions and other provisions set forth in the State Labor Code.

### PRESIDENT AND DIRECTING REPRESENTATIVE, DISTRICT LODGE 727

1961 to 1975  
Burbank, CA

International Association of Machinists &  
Aerospace Workers

Elected to serve as Administrative Director of major union with 20,000 members employed in aerospace manufacturing, missile and electronic development. Supervised the activities of 14 Business Representatives and support staff.

### BOARDS & COMMISSIONS

Chair, Board of Directors  
California Manufacturing Technology  
Center

Vice Chair  
California Employment Training Panel

Board of Directors  
Cal-Start Electric Vehicle Consortium

Board of Directors  
California Foundation on the Environment  
& Economy

Board of Directors  
Select Panel, Project California

President  
Californians for Jobs & Clean Air

Board of Directors  
High-Tech Council, LA Economic  
Development Council



## LAWRENCE J. RHOADES

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Toll Free: 1-800-367-1109  
Fax: (412) 863-8759

### **PRESIDENT EXTRUDE HONE CORPORATION**

Lawrence J. Rhoades is President of Extrude Hone Corporation, a firm that develops and provides nonconventional machining, finishing, measurement and "free-form fabrication" systems equipment and services to a broad range of manufacturers. He studied Economics and Mechanical Engineering at Brown University and received an M.B.A. from Northwestern University. He holds patents on more than two dozen inventions relating to nontraditional manufacturing methods and equipment. He chaired the Advisory Committee of the Export/Import Bank of the United States in 1988/89, and was named Pennsylvania's Small Business Exporter of the Year in 1989. He has held numerous positions within the Society of Manufacturing Engineers (SME) and within the Association for Manufacturing Technology (AMT), including chairing the Exposition Committees of both organizations and serving on the AMT's Board of Directors. He is presently a member of the AMT's Government Relations Committee and a member of the Executive Committee of the Multi-Association Industry Task Force on Affordability advising the Defense Manufacturing Council of the U.S. Department of Defense. Currently,

Mr. Rhoades chairs the Board of the Southwestern Pennsylvania Industrial Resource Center (a NIST MEP). He also serves on the Boards of Concurrent Technologies Corporation, the World Trade Center Pittsburgh, the Ben Franklin Technology Center of Western Pennsylvania, the Pittsburgh Regional Alliance and the National Center for Manufacturing Sciences.



## WILLIAM R. WEBBER

6 Barrington Drive  
Greensboro, NC 27408  
Telephone: (910) 282-9669  
Fax: (910) 288-3879

### INTERIM DIRECTOR PT CAM

William R. Webber is Interim Director of PT CAM, a non-profit North Carolina training firm specializing in shop-floor training using the most up-to-date metal-working equipment. He also serves on their board. Before he assumed his current role at PT CAM, he was a business advisor/consultant.

Webber is a proven chief executive/operating officer in consumer and capital goods businesses and staff executive for strategic planning, business development and human resources.

From 1984 to 1987, he was President, COO and Board Member and later CEO of The Raymond Corporation, traded on NASDAQ and headquartered near Binghamton in Green, N.Y. Until 1980 it was clearly recognized as the industry leader in electric fork lift trucks. During his tenure at Raymond, the integration of two acquisitions into normal operations was initiated and successfully completed and a software development company formed and grown.

Before that, Webber was Corporate Vice President of Allegheny International, Inc. for two years. Prior to that, during a career with General Electric Company spanning 28 years, Webber served in various capacities including general manager of Range Product Management Department and vice-president of their Television Business Division.

Webber holds a B.A. in Business Administration from Bucknell University and an M.A. in Economics from the University of Pennsylvania.

## MANUFACTURING EXTENSION PARTNERSHIP LOCATIONS

